Quantification and Tumour Delineation in PET

Cheebsumon, P.

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List of abbreviations

	Symbols
2-D	2 dimensional
3-D	3 dimensional
	A
AUC	area under the curve
	B
BSA	body surface area
BW	body weight
	C
C_P	concentration of tracer in arterial plasma
C_S	concentration of specifically bound tracer
C_T	tumour concentration
C_{ND}	concentration of non-displaceble tracer in tissue
cm	centimeter
COPD	chronic obstructive lung disease
COV	coefficient of variation
CT	computed tomography
	D
D	administered dose
DNA	deoxyribonucleic acid
	E
EGFR	epidermal growth factor receptor
EORTC	European Organization for Research and Treatment of Cancer
	F
FBP	filtered backprojection
FCM	fuzzy C-means
FDG	fluoro-2-deoxy-D-glucose
FLAB	fuzzy locally adaptive Bayesian
FLT	3′-fluoro-3′-deoxy-L-thymidine
FWHM	full-width at half-maximum
	G
Ge	Germanium
GI	gastrointestinal cancer
Grad^{WT}	gradient-based watershed delineation method
GTV	gross tumour volume
	H
H_2O	dihydrogen monoxide (water)
HU	Hounsfield unit

	I
IDIF	image-derived input function
	K
K_1	delivery (pharmacokinetic parameter)
K_i	influx rate constant
kBq	kilobecquerel
keV	kiloelectron volt
kg	kilogram
	L
LBM	lean body mass
LOR	line-of-response
	M
MBq	megabecquerel
min	minute
ml	milliliter
mm	millimeter
mmol/l	millimole per liter
MR_{Glu}	metabolic rate of glucose
MRI	magnetic resonance imaging
	N
n	number
nAUC	normalized AUC
NEMA	National Electrical Manufacturers Association
NLR	nonlinear regression
ns	nanosecond
NSCLC	non-small cell lung cancer
	O
O	oxygen
OSEM	ordered subsets expectation maximization
	P
PET	positron emission tomography
PSF	point spread function
	R
R^2	squared Pearson's correlation coefficient
RTL	relative threshold level
	S
s	second
SBR	signal to background ratio
SD	standard deviation
SE	standard error
SKM	simplified kinetic method
SUV	standardized uptake value

$SUV^{2.5}$	absolute SUV of 2.5 delineation method
SUV_{BSAg}	SUV normalised by body surface area and corrected for glucose
SUV_{BSA}	SUV normalised by body surface area
SUV_{BWg}	SUV normalised by body weight and corrected for glucose
SUV_{BW}	SUV normalised by body weight
SUV_{LBMg}	SUV normalised by lean body mass and corrected for glucose
SUV_{LBM}	SUV normalised by lean body mass
SUV_{max}	maximum SUV value

T

TAC	time-activity curve
TBR	tumour to background ratio
TOF	time-of-flight

V

VOI	volume of interest
VOI^{50}	fixed threshold delineation method using 50% of maximum voxel value within a tumour
VOI^{A50}	adaptive (correcting for the local background value) threshold delineation method using 50% of maximum voxel value within a tumour
VOI^{RTL}	RTL delineation method
$VOI^{Schaefer}$	contrast-orientated delineation method implemented by Schaefer et al.

W

WT	watershed transform